

	ZIRCAR Refractory Composites, Inc. P.O. Box 489 Florida, NY 10921-0489 Telephone: (845)651-2200 Email: sales@zrci.com www.zrci.com	Safety Data Sheet RS-ZFELT	Document #: ZRCI SDS-101	Rev.: 01	Date: 3/17/2020

1. Product Identification
Product Types: RS-ZFELT

Synonym: Yttria Stabilized Zirconia Ceramic Fiber

2. Hazards Identification
Classification (GHS-US): None.

Hazards not otherwise classified: None.

3. Composition

Component	Synonyms	CAS Number	% by Weight	Classification (GHS-US)
Yttria Stabilized Zirconia Fibers	YSZ	308076-80-4	100	None

4. First Aid Measures
Inhalation: Remove to fresh air. Rinse mouth to clear throat and expel liquid. Blow nose to evacuate dust. Consult a physician if irritation persists.

Eye Contact: Do not rub eyes. Keep hands or contaminated body parts away from eyes. Remove contact lenses. Flush with water. If irritation persists, consult a physician.

Skin Contact: Wash with soap and water. For dryness, a skin cream may be helpful. Do not apply anything to a rash. Consult a physician if irritation persists.

Ingestion: Do not induce vomiting without advice of a physician. Seek medical attention.

5. Fire-Fighting Measures: Product is not flammable.

Special Hazards arising from the substance: None.

Advice for firefighters: None.

6. Accidental Release Measures: Clean up procedures should minimize formation of airborne dusts. Remove dust by vacuuming using HEPA filtration where possible.

Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Avoid contact with skin, eyes, or clothing. Avoid breathing dust.

For Non-Emergency Personnel: Use appropriate personal protection equipment (PPE), gloves, glasses, dust mask.

For Emergency Responders: Equip cleanup crew with proper protection. Ventilate area.

Environmental Precautions: None.

References to Other Sections: See section 8. Exposure Controls/ Personal Protection. For waste disposal refer to section 13.

7. Handling and Storage
Precautions for Safe Handling
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Machining and Cutting: These materials may produce nuisance dust when machined or cut.

Conditions for Safe Storage, Including any Incompatibilities
Storage Conditions: These materials are stable and may be stored indefinitely.

Incompatible Products: Powerful oxidizers; fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, etc.

Specific End Use: Insulation, Gasketing

8. Exposure Controls/ Personal Protection
Control Parameters

There is no specific OSHA Permissible Exposure Limit (PEL) or ACGIH Threshold Limit Value (TLV) for Yttria Stabilized Zirconia Fibers, CAS# 308076-80-4. Because zirconia fibers have diameters of 6-10 microns they are larger than respirable.

Exposure Controls
Appropriate Engineering Controls: Ensure adequate ventilation. Emergency eye wash should be available. Ensure regulations are observed.

Personal Protective Equipment: Protective goggles, gloves, protective clothing. Dust formation: dust mask type N95.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

9. Physical and Chemical Properties

Physical State	Solid: cloth, felt, rigid shape, powder or fibers	Auto ignition Temperature	No data available
Color	White	Decomposition Temperature	
Odor	Odorless	Flammability (solid, gas)	
Odor Threshold	No data available	Vapor Pressure	
pH		Relative Vapor Density at 20C	
Evaporation Rate		Relative Density	
Melting/ Freezing Point		Solubility	
Boiling Point	No data available	Partition Coefficient: N-Octanol/ Water	
Flash Point		Viscosity	

10. Stability and Reactivity
Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Incompatible Materials: Powerful oxidizers: fluorine, chlorine trifluoride, magnesium trioxide, oxygen difluoride, etc.

Hazardous Decomposition Products: None.

11. Toxicological Information: No information available.

Epidemiology: No information available.

Distribution: Zirconium Oxide and Yttrium Oxide are naturally occurring and widely distributed in igneous rock. Deposits in sedimentary rock may be found.

Chemical Fate Information: The relative inertness of this material indicates that it may be highly persistent in the environment. No information regarding any negative effects of this persistence has been noted.

12. Ecological Information: Ecological data are not available.

13. Disposal Considerations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

14. Transportation Information: Not regulated hazardous substances, no specific regulations apply.

15. Regulatory Information
WHMIS Status: Ceramic fibers with $\leq 3\mu\text{m}$ diameter are Class D2 controlled product based on an IARC 2B Classification. Zirconia fibers are 6-10 μm diameter and are not respirable and not controlled.

California Proposition 65: Zirconia fibers are 6-10 μm diameter and are not respirable and not controlled.

SARA Section 313 Supplier Notification: This product does not contain toxic chemicals subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 Section 313 (40 CFR 372).

16. Other Information: The information contained herein is based on data considered to be accurate as of the preparation or revision date. It is provided in good faith and in compliance with state and federal regulations. No warranty or representation, express or implied is made as to the accuracy or completeness of this information. Other national, state and/or local regulations may apply.